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EXAMINER	
SMITH, ARTHUR A	

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/019,171	Applicant(s) RUETZ ET AL.	
	Examiner Arthur A Smith	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 36-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 36-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 October 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because Figures 1a and 1b appear to contain copyrighted works. See 37 C.F.R. 184(s) and 37 C.F.R. 1.71(e) set forth below.

1.84(s) Copyright or Mask Work Notice. A copyright or mask work notice may appear in the drawing, but must be placed within the sight of the drawing immediately below the figure representing the copyright or mask work material and be limited to letters having a print size of 32 cm. to 64 cm. (1/8 to 1/4 inches) high. The content of the notice must be limited to only those elements provided for by law. For example, "©1983 John Doe" (17 U.S.C. 401) and "*M* John Doe" (17 U.S.C. 909) would be properly limited and, under current statutes, legally sufficient notices of copyright and mask work, respectively. Inclusion of a copyright or mask work notice will be permitted only if the authorization language set forth in § 1.71(e) is included at the beginning (preferably as the first paragraph) of the specification.

1.71(e) The authorization shall read as follows: A portion of the disclosure of this patent document contains material which is subject to {copyright or mask work} protection. The {copyright or mask work} owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent file or records, but otherwise reserves all {copyright or mask work} rights whatsoever.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 58 is objected to because of the following informalities: It appears that "convention" should be changed to - - convection - -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim specifies that the scent substance is discharged through "direct discharge – in other words, without the assistance of a carrier gas." However, air is a carrier gas and it would be impossible for the scent to travel to the user without the assistance of air. Looking at paragraph 7 of the specification the examiner is unclear on how a micrometering pump would transport the gas without air or how the scent of the aroma cloud would rise to the user's nose without air.

Claims 42, 44, 46 and 68 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for discharging the scent substance through thermal means (heating elements and lasers), paragraphs 35-43, does not reasonably provide enablement for discharging the scent substance through electrochemical means. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification does not disclose the type, quantity, or method of disbursement needed for the reagent to produce the discharging of the scent substance through electrochemical means.

Claim 51 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for atomizing or vaporizing, does not reasonably provide enablement for atomizing and vaporizing. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification does not disclose a device that does both atomizing and vaporizing of the discharged scent substances.

Claims 56 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for discharging the scent substance through thermal means (heating elements and lasers), paragraphs 35-43, does not reasonably provide enablement for discharging the scent substance through a microwave unit. The specification does not enable any person skilled in the art to which it pertains, or with

which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification does not disclose the type, quantity, or method of disbursement needed for the microwave unit to produce the discharging of the scent substance through electrochemical means.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, 2, 37, 42 44, 58 and 60-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instances:

Claim 1 recites the broad recitation "direct discharge," and the claim also recites "without the resistance of a carrier gas" which is the narrower statement of the range/limitation.

Claim 2 recites the broad recitation "into the ambient air," and the claim also recites "without exposing appliance components thereto" which is the narrower statement of the range/limitation.

Claim 37 recites the broad recitation "chip card," and the claim also recites "(scent chip)" which is the narrower statement of the range/limitation.

Claim 58 recites the broad recitation "natural convention (sic)," and the claim also recites "(body heat)" which is the narrower statement of the range/limitation.

Claims 60-68 recites the broad recitation "aroma store," and the claim also recites "(scent chip)" which is the narrower statement of the range/limitation.

Regarding claims 42, 46 and 66, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 37-41, 43-45, 57-62 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Spector (US 4629604), supplied by applicant.

In reference to claim 1, Spector discloses an appliance for dispensing scents having an aroma store, col. 4 lines 6-11, a control unit for controlling the aroma store, and a discharge unit for generating and discharging a scent/aroma cloud from the aroma store, col. 4 line 64 – col. 5 line 25, wherein the appliance is embodied as a miniaturized mobile unit to be worn on the body or to be disposed in close vicinity to the user, col. 6 lines 1-11 (if integrated with a video tape player it has to be portable and would also have to be disposed in a close vicinity to the user for the user to sense the aromas released from the device), and the discharge unit discharges the controlled scent substances stored in the appliance by means of direct discharge – in other words, without the assistance of a carrier gas, col. 4 lines 30-40.

In reference to claim 2, Spector discloses wherein the discharge unit discharges the controlled scent substances stored in the appliance directly into the ambient air- in other words without exposing appliance components thereto, col. 4 lines 30-40.

In reference to claim 37, Spector discloses wherein the aroma store is embodied as a microchip that can be controlled by the control unit or as a chip card having scent substance storage locations, col. 3 line 21 – col. 4 line 4.

In reference to claim 38, Spector discloses wherein the scent chip having the scent substance storage locations is embodied as a replaceable part, col. 4 lines 59-62.

In reference to claim 39, Spector discloses wherein the scent chip has a carrier in or on which the scent substances are disposed in the form of liquids, gels, gases, or solids, col. 3 lines 47-52.

In reference to claim 40, Spector discloses wherein the scent chip has a carrier with an arrangement of porous substances in or on which the scent substances are attached in the form of liquids gels, or solid deposits, col. 3 lines 35-52.

In reference to claim 41, Spector discloses wherein the scent chip has a carrier with an arrangement of microtanks that hold the scent substances in liquid, gel, or gaseous form and that are covered by a protective layer, col. 3 lines 47-52.

In reference to claim 43, Spector discloses wherein in the applicance one element that can be controlled by the control unit and that is used to discharge scent substance is assigned to each scent substance storage location, col. 4 lines 6-20.

In reference to claim 44, Spector discloses wherein the appliance one element that can be controlled by the control unit and that is used to discharge scent substance by thermal and/or electrochemical means is assigned to each scent substance storage location, col. 4 lines 19-20.

In reference to claim 45, Spector discloses wherein the scent chip has a carrier with an arrangement of microtanks that hold the scent substances in liquid, gel, or gaseous form and that are covered by a protective layer one element that can be controlled by the control unit and that is used to discharge scent substance is assigned to the scent substance storage location and one element that can be controlled by the

control unit and that is used to break open the microtank is assigned to each scent substance storage location, col. 4 lines 30-40.

In reference to claim 57, Spector discloses wherein a receiving module for external control by means of a signal-generating unit or timer unit is assigned to the control unit, col. 5 lines 3-17.

In reference to claim 58, Spector discloses a small blower to assist the upward movement of the discharged scent or aroma cloud that occurs due to natural convention (body heat), col. 6 lines 22-26.

In reference to claim 59, Spector discloses a heater to enhance the discharged scent or aroma cloud, col. 5 lines 15-17.

In reference to claim 60, Spector discloses a carrier in or on which the scent substances are disposed in liquid, gel, gaseous or solid form, col. 3 lines 47-52.

In reference to claim 61, Spector discloses an arrangement of porous substances in or on which the scent substances are attached in the form of a liquid, gel, or solid deposits, col. 3 lines 35-52

In reference to claim 62, Spector discloses a carrier in the form of a resin/plastic or cardboard sheet having an arrangement of depressions/holes holding the porous substances, col. 3 lines 35-52.

In reference to claim 65, Spector discloses wherein the porous substances are embedded in a silicon on plastic resin compound, col. 3 lines 53-59.

Claims 1, 2, 36 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Manne (US 2002/0018181 A1).

In reference to claim 1, Manne discloses an appliance for dispensing scents having an aroma store, paragraph 62, a control unit for controlling the aroma store, and a discharge unit for generating and discharging a scent/aroma cloud from the aroma store, paragraph 57, wherein the appliance is embodied as a miniaturized mobile unit to be worn on the body or to be disposed in close vicinity to the user, paragraph 54, and the discharge unit discharges the controlled scent substances stored in the appliance by means of direct discharge – in other words, without the assistance of a carrier gas, paragraph 72.

In reference to claim 2, Manne discloses wherein the discharge unit discharges the controlled scent substances stored in the appliance directly into the ambient air- in other words without exposing appliance components thereto, paragraph 57.

In reference to claim 36, Manne discloses wherein the discharge unit discharges the controlled scent substances stored in the appliance in sync with the user's respiratory process, paragraph 218.

In reference to claim 47, Manne discloses wherein the scent substances are stored in liquid form in an aroma reservoir cartridge, and the discharge unit discharges the stored scent substances by mean of a micrometering pump, paragraph 72-77.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manne (US 2002/0018181 A1).

Manne discloses an appliance for dispensing scents having an aroma store, paragraph 62, a control unit for controlling the aroma store, and a discharge unit for generating and discharging a scent/aroma cloud from the aroma store, paragraph 57, wherein the appliance is embodied as a miniaturized mobile unit to be worn on the body or to be disposed in close vicinity to the user, paragraph 54, and the discharge unit discharges the controlled scent substances stored in the appliance by means of direct discharge – in other words, without the assistance of a carrier gas, paragraph 72 wherein the scent substances are stored in liquid form in an aroma reservoir cartridge, and the discharge unit discharges the stored scent substances by mean of a micrometering pump, paragraphs 72-77. Manne does not disclose wherein the micrometering pump utilizes piezoelectric or thermal actuators. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that the manually electrically or pneumatically actuated pumps of Manne, paragraph 76, are interchangeable with piezoelectric or thermal actuators. It is old and well known in the art that these types of actuators are generally equivalent and the substitution of one for the other would therefore be only a design choice. Further, as disclosed by Manne in the first sentence of paragraph 76 any type of valve system can be employed.

Claims 51-54, 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (US 4629604) in view Murayama et al. (US 6282458 B1).

Spector discloses wherein a microheating element for vaporizing the discharge scent substances is assigned to the discharge unit, col. 4 lines 19-29. Spector does not disclose a means for atomizing the discharged scent substance through a mechanical, ultrasonic or electrostatic atomizing device. Murayama et al. discloses that a scent substance can be discharged through means of atomization through a mechanical, ultrasonic or electrostatic atomizing device, col. 6 line 60 – col. 7 line 64. Murayama et al. also discloses that scent substance can be discharged through vaporization by means of a heating element, col. 7 line 65 – col. 8 line 14 and an electrical insulating layer on the underside of the carrier sheet, col. 8 lines 19-23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that discharge of scent substances in the device of Spector could be accomplished through a mechanical, ultrasonic or electrostatic atomizing device since these methods are shown by Murayama et al. to be equivalent and interchangeable with dispensing through vaporization, col. 6 line 60 – col. 8 line 14. The substitution of one for another would be a design choice. It would further have been obvious to provide an insulating layer to the carrier sheet to prevent damage from the heating element.

Claims 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (US 4629604) in view Manne (US 2002/0018181 A1).

Spector discloses wherein a microheating element for vaporizing the discharge scent substances is assigned to the discharge unit, col. 4 lines 19-29. Spector does not disclose the use of a micrometering pump. Manne discloses the use of a micrometering pump, paragraphs 72-77. It would have been obvious to one of ordinary skill in the art at

the time the invention was made to realize that the addition of a micrometering pump to the scent dispensing system of Spector. This would provide more control to the delivering of the scent to the user than the blower alone could. Further, Spector only discloses the use of a heating element to vaporize the scent substances. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that vaporization is produce through heating and thus any manner of heating, such as microwaves, would produce an equivalent result as an heating element. Substitution for one over the other would be a matter of design choice.

Claims 66 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (US 4629604) in view Martens, III et al. (US 4849606).

Spector does not disclose wherein the scent substance-saturated porous substances are sealed on their upper side, for example by means of wax. Martens, III et al. discloses wherein a scent saturated substance is sealed on the upper side, col. 4 lines 49-69. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that a seal could provided on scent storage devices of Spector. The use of a seal would help to prevent tampering as taught by Martens, III et al., col. 6 lines 28-51.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watkins (US 6357726 B1) discloses a localized scent delivery apparatus that demonstrates that delivery of the scent can be accomplished in many

equivalent ways, see columns 6-8. Martin (US 5610674) and Spector (4346059) shows a background of the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arthur A Smith whose telephone number is (571) 272 2129. The examiner can normally be reached on Monday - Thursday from 8:00 AM to 5:30 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arthur A. Smith
April 13, 2004